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Taiwanese speech–language therapists' awareness and experiences of service provision to transgender clients

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ABSTRACT

Background: One of the most influential factors that affect the quality of life of transgender individuals is whether they can be perceived by others to "pass" in their felt gender. Voice and communication style are two important identifying dimensions of gender and many transgender individuals wish to acquire a voice that matches their gender. Evidence shows that few transgender individuals access voice therapy, and that this is caused by their concerns about stigmatization or negative past experiences within healthcare services. In order to address the negative experiences faced by transgender populations we need a better understanding of healthcare services' current levels of knowledge and LGBT awareness. Some studies of Speech–Language Therapists' (SLTs') experience and confidence working with transgender individuals have recently been undertaken in the United States (US). However, little research has been carried out in Asia.

Aims: To investigate Taiwanese SLTs' knowledge, attitudes and experiences of providing transgender individuals with relevant therapy.

Method: A cross-sectional self-administered web-based survey hosted on the Qualtrics platform was delivered to 140 Taiwanese SLTs.

Results: Taiwanese SLTs were, (i) more familiar with the terminology used to address "lesbian, gay, and bisexual groups" than with "transgender" terminology, (ii) generally positive in their attitudes toward transgender individuals, and (iii) comfortable about providing clinical services to transgender clients. However, the majority of participants did not feel that they were sufficiently skilled in working with transgender individuals, even though most believed that providing them with voice and communication services fell within the SLT scope of practice.

Conclusion: It is important for clinicians to both be skilled in transgender voice and communication therapy and to be culturally competent when providing services to transgender individuals. This study recommends that cultural competence relating to gender and sexual minority groups should be addressed in SLTs' university education as well as in their continuing educational programs.

KEYWORDS
Taiwan; transgender; speech–language therapists; speech–language pathologists; voice and communication therapy

Introduction

In the past decade, societal and cultural changes in Taiwan have led to greater public awareness about Lesbian, Gay, Bisexual, and Transgender (LGBT) issues.[1] This article presents the findings of a study which aimed to explore basic awareness of LGBT terminology; and professional awareness in relation to transgender voice therapy among Speech and Language Therapists (SLTs) in Taiwan. Understanding SLTs' current awareness and experience of services for transgender individuals is important in order to identify opportunities and challenges of delivering services, and research such as this can be used to promote transgender cultural competences. Some studies of SLTs' experience and confidence of working with transgender individuals have recently been undertaken in the United States (US) (Hancock & Haskin, 2015; Sawyer, Perry, & Dobbins-Scaramelli, 2014). However, there has been little research carried out

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[1]The term LGBT is used rather than LGBTQ + or other alternatives, because this study is based in Taiwan, where new approaches are emerging specifically for lesbian, gay, bisexual, and transgender patients in the healthcare system. As reflected in the methods, below, this study asks what each term ("lesbian," "gay," "bisexual," "transgender") means to practitioners, as there is no commonly used abbreviated form such as LGBT in Taiwanese healthcare.

into LGBT awareness and experiences among SLTs outside the US.

LGBT-affirming healthcare services have recently been promoted in Taiwan (Wei, Chen, & Ku, 2015) and ways to foster LGBT-affirming healthcare services through education, policies, clinical practice, and research have been suggested (ibid). Hsiao (2012) has shown that Taiwanese clinicians tend to provide health care to individuals from a cisgender/cisnormative perspective and may not understand or competently address the specific needs of transgender individuals. "Cisgender" is a label for individuals whose gender identity is the same as the sex they were assigned at birth and "cisnormativity" is the assumption that it is "normal" to be cisgender (Schilt & Westbrook, 2009). Relying on such an assumption, together with clinicians' lack of knowledge about transgender care can exacerbate health inequalities in Taiwanese (and other) context(s).

One of the needs of transgender individuals is to acquire a voice that matches their gender. Indeed, one of the most influential factors that affects the quality of life for transgender individuals is whether they can be perceived by others to "pass" in their experienced gender (Davies & Goldberg, 2006). The goal of voice therapy for transgender individuals is to help the transgender individual attain a comfortable voice and communication style (Coleman et al., 2012). Hence, transgender individuals may seek voice feminization/masculinization services from SLTs, particularly because voice has a big impact on perceptions of gender (Hancock & Haskin, 2015). For trans men who receive hormone replacement therapy (HRT), the HRT generally causes thickening of the vocal folds, resulting in a lower pitch, though the change associated with HRT alone might not be satisfactory for everyone (Adler, Constansis, & Van Borsel, 2012; those authors refer to "FtM" rather than "trans men"). For trans women who receive HRT, however, the HRT does not affect voice pitch (Davies & Goldberg, 2006; Freidenberg, 2002; again, those authors refer to "MtF" rather than "trans women"). Moreover, trans men or women may elect not to receive HRT, and may still seek voice therapy. Finally, non-binary individuals may choose to either masculinize or feminize their voices, with or without HRT. In clinical practice, therefore, the vast majority of transgender individuals who seek voice and communication therapy are trans women.

Several consistent themes emerge in research into voice therapy for transgender individuals. They can be summarized as follows: SLTs play an important role in assisting transgender individuals to feminize or masculinize their voice (Davies, Papp, & Antoni, 2015; Mills, Stoneham, & Georgiadou, 2017; Sawyer et al., 2014); some SLTs do not feel adequately trained to provide voice feminization or masculinization services (Hancock & Haskin, 2015; Sawyer et al., 2014); transgender individuals are most comfortable with health professionals who are culturally competent (Kelly & Robinson, 2011; Pitts, Couch, Croy, Mitchell, & Mulcare, 2009); and SLTs must become culturally competent in order to be able to provide comprehensive care to transgender individuals (Davies & Goldberg, 2006; Davies, Papp, & Antoni, 2015; Leadbeater & Litosseliti, 2014). Davies and Goldberg (2006) defined cultural competence as the capacity to provide respectful and relevant services to a diverse range of clients. Being culturally competent—an ongoing process—involves people becoming aware of their own as well as others' attitudes, biases and cultural beliefs, to help best deliver services to particular populations (Sue, 2001). Davies and Goldberg (2006) proposed that culturally competent care for transgender individuals includes the knowledge of terminology; diversity of gender identity and expression; and the psychosocial, physical, and emotional issues that shape therapy and treatment decisions. Leadbeater and Litosseliti have also discussed the ways in which SLTs employ a range of cultural competence practices in their everyday work. Additionally, in order to provide care that is comprehensive, SLTs must be able to work as part of a multi-disciplinary team that includes medical and mental health professionals (Coleman et al., 2012; Hooper & Hershberger, 2012).

However, two major barriers may hinder this aim with regards to the transgender population: (i) clinicians may not be aware of the specific needs of transgender individuals, and (ii) even if they are aware of them, some are unable to provide the service required (Safer et al., 2016; Turner, Wilson, &

Shirah, 2006). Pitts et al. (2009) reported that transgender individuals were most comfortable with health professionals who are aware of gender diversity and who understand their difficulties regarding health care services. Similarly, Kelly and Robinson (2011) found that some transgender individuals utilized social networks in order to find culturally competent clinicians before seeking voice and communication therapy.

This article examines Taiwanese SLTs' knowledge, attitudes and experiences of providing therapy for transgender individuals.

Methods

Informed consent was obtained from all participants included in the study. The study was approved by the City, University of London, School of Health Sciences Ethics Committee (London, United Kingdom) and the Ethics Committee of Taiwanese Cheng Ching Hospital (Taipei, Taiwan). Data for the study were collected through a cross-sectional self-administered web-based survey hosted on the Qualtrics platform. No personal data were collected when participants completed the questionnaire, to ensure complete anonymity. The questionnaire contained a mixture of open-ended, multiple choice and dichotomous questions (see below), based on that used by Sawyer et al. (2014). These were translated into Mandarin Chinese (Putonghua) by a postgraduate speech–language therapy student at City, University of London, who is also a native speaker of Mandarin Chinese.

A total of 196 respondents participated in the survey through snowball recruitment, but 140 met the inclusion criteria to complete the online survey. Those who did not meet the criteria were either not qualified SLTs or not currently working in Taiwan. Consequently, only the data collected from 140 qualified SLTs was used. The majority worked in northern and central Taiwan and identified themselves as cisgender women. Specifically, 116 of the respondents identified as cisgender women and 24 identified as cisgender men. The majority (almost 70%) held a Bachelor's degree, 30% held a Master's degree and 1 of the respondents held a doctoral degree. Years of experience working as an SLT ranged from less than 5 years to over 15 years in cross-multiple settings, with the majority in medical environments, including Rehabilitation Centers, ENT and private practices; the latter were more likely to involve transgender clients. Only 19% worked in social welfare foundations or school settings, while approximately 3% who reported they worked in "other" settings were in areas involving early intervention, which were unlikely to provide services for transgender individuals.

The questions in the survey appear in Table 1. The first and second questions ("Are you currently working as an SLT in Taiwan?" and "Did you complete your SLT training in Taiwan?") were used to eliminate ineligible participants. The system adopted ensured that respondents reached the end of the survey if "No" was answered to either of these questions. The third and the fourth questions collected demographic information about the area where the participants work and their gender. The options offered for questions regarding employment settings (Q 5) were formulated to show the setting in which the Taiwanese SLTs work. Instead of using the term "LGBT," which is not routinely used in Taiwan (see footnote), respondents were asked what each term ("lesbian," "gay," "bisexual," "transgender") means to them. For the purpose of this research, "lesbian" is used to refer to "female-identified people who have romantic, emotional, or sexual attraction to other female-identified people;" "gay" to refer to "male-identified individuals who have romantic, emotional, or sexual attractions to other male-identified people;" "bisexual" to refer to "individuals who have romantic, emotional, or sexual attractions to both male-identified and female-identified" and "transgender" to refer to "individuals who believe that their sex at birth does not match their psychosocial gender" (Steckly, 2009). Other questions obtained information on SLTs' level of education, years of working experience, experience of providing services to transgender clients and awareness of, and sensitivity to, the transgender culture. The questions were not randomized though; future replica studies could include randomization.

The data analysis was based on Sawyer et al. (2014), using SPSS Version 23 and, descriptive statistics, such as demographic information,

familiarity with transgender culture, the scope of practice, preparedness for providing services to transgender clients, and competence. Familiarity with transgender culture and its terminology were examined by posing open ended questions, which were rated either as "accurate," "accurate but too narrow," "accurate but provides additional inaccurate information," "no idea," and "inaccurate." Responses were marked as "accurate" if they accorded closely with the definitions used in this study (see above). If participants provided accurate definitions but focused too much on a single aspect, their responses were marked as "accurate but too narrow," and when their responses were accurate but contained additional inaccurate information, they were marked as "accurate but provides additional inaccurate information." Responses were marked as "inaccurate" when the definitions were totally inaccurate or irrelevant, according to the study definitions. Opinions about the scope of practice, preparedness and competence were examined via a series of multiple choice questions.

In order to investigate whether employment settings and years of experience working as an SLT influence SLTs' familiarity with transgender culture, awareness, preparedness and competence, the following comparisons were made using chi square analyses:

- Employment settings and familiarity with transgender culture.
- Years of experience working as an SLT and familiarity with transgender culture.
- Years of experience working as an SLT and scope of practice.
- Employment settings and scope of practice.
- Years of experience working as an SLT and preparedness.
- Years of experience working as an SLT and competence.
- Employment settings and competence.

Results

Familiarity with LGBT

For this survey, respondents were asked to define what they understood in terms of the terminology "lesbian," "gay," "bisexual," and "transgender." A rating scale (ranging from accurate, almost accurate, inaccurate, no idea, and did not answer) developed by Sawyer et al. (2014) was used to rate their answers, alongside the operational definitions of these terms used in this study (see above). All responses were scored independently by two raters, including a qualified SLT in the United Kingdom (UK) and a qualified SLT in Taiwan. Both raters identified as heterosexual cisgender women. The SLT in Taiwan was trained to use the scale by the SLT in the UK, and to rate ten responses that were selected randomly from participants' answers and which were used for evaluation and discussion purposes before independent rating started. The independent scores from the two raters were compared and, where there were disagreements about particular scores, they were discussed. The summary of ratings for respondents' familiarity with LGBT is shown in Table 1.

In line with the definitions adopted in this study (Steckly, 2009), most respondents (94%) stated that "lesbians" refer to females who have experienced emotional or sexual attractions to other females. Further, 31 of the 131 respondents used the term lesbian to describe a variation of relationships, such as "females who have had a female partner before, or still have a relationship with other females." Based on the definition used in this study, those responses focused too much on one aspect when defining "lesbians," therefore, they were coded as "accurate but too narrow." In addition, 8 out of the 131 provided an accurate definition together with additional inaccurate information, such as "lesbians who might define themselves as either male or female"—those responses were coded as "accurate but provides additional inaccurate information." A total of 6% (9) were coded as "inaccurate" by defining lesbians as "people who love females" or "people who are in a relationship with a female." In regards to the term "gay," most responders (92%) defined "gay" by referring to "male individuals who experienced emotional or sexual attractions to other males." Nevertheless, 29 of the 129 participants provided definitions that were too narrow and similar to the responses for "lesbian." Moreover, 8 out of the 129 gave definitions with additional inaccurate

Table 1. Summary of findings ($N = 140$).

Question Response	Percentage (%)	*n*
Familiarity with LGBT		
What does the term "lesbian" mean to you?		
Accurate	65.71	92
Accurate but too narrow	22.14	31
Accurate but provides additional incorrect information	5.71	8
No idea	0.00	0
Inaccurate	6.43	9
What does the term "gay" mean to you?		
Accurate	65.71	92
Accurate but too narrow	20.71	29
Accurate but provides additional incorrect information	5.71	8
No idea	0.00	0
Inaccurate	7.86	11
What does the term "bisexual" mean to you?		
Accurate	57.14	80
Accurate but too narrow	10.00	14
accurate but provides additional incorrect information	12.14	17
No idea	0.00	0
Inaccurate	20.71	29
What does the term "transgender" mean to you?		
Accurate	32.14	45
Accurate but too narrow	29.29	41
Accurate but provides additional incorrect information	6.43	9
No idea	7.14	10
Inaccurate	25.00	35
Scope of practice and preparedness		
Do you think it is within the scope of practice of SLTs to provide voice and/or communication training to Transgender individuals seeking services?		
Yes	75.00	105
No	12.14	17
Not sure	12.86	18
In thinking about your educational experiences (school or conferences), did you learn about how to provide treatment for a transgender client?		
No, I did not learn about this.	61.43	86
I only learned a very little bit (under 4 hours).	35.71	50
I learned a great deal about this (4 hours or more).	2.86	4
My education (school) has prepared me well for treating a transgender client.		
Strongly agree	0.71	1
Agree	5.00	7
Neutral	29.29	41
Disagree	42.14	59
Strongly disagree	22.86	32
Competence		
I am comfortable in providing an assessment for a transgender client seeking services.		
Strongly agree	22.86	32
Agree	38.57	54
Neutral	30.71	43
Disagree	6.43	9
Strongly disagree	1.43	2
I am comfortable in providing treatment for a transgender client.		
Strongly agree	21.43	30
Agree	39.29	55
Neutral	29.29	41
Disagree	8.57	12
Strongly disagree	1.43	2
Do you currently have, or have you ever had, a transgender client on your caseload?		
Yes, currently	1.43	2
Not currently but in the past	13.57	19
No, never	85.00	119

*This table follows the model of Sawyer et al. (2014).

information, such as "gay people who might have several partners at the same time," or they "might define themselves as either male or female." A total of 8% (11) were coded as inaccurate by defining "gay" as "people who love males" or "two *female* individuals who are in a relationship." Similarly to the terms "lesbian" and "gay," most respondents (79%) provided the accurate definition for the term "bisexual." However, 14 of those also gave further information that was too narrow,

such as "bisexual individuals who have had both male and female partners before, or were still in the relationship." In addition, 17 out of 111 provided accurate definitions with additional inaccurate information, for instance, "bisexual people love both male and female at the same time." A total of 21% (29) were coded as inaccurate by defining "bisexuals" as "people who love female or male" or "people who can be lesbian and gay individuals at the same time." Lastly, in regards to the term "transgender," 68% of respondents stated that "transgender" refers to "individuals whose gender identity is inconsistent with their biological sex." Nevertheless, 41 out of 95 defined transgender narrowly, such as "individuals who have undergone SRS." However, 9 out of 95 provided accurate definitions with additional inaccurate information, such as "these individuals are homosexuals." A total of 7% (10) and 25% (35) reported that they did not know how to define "transgender" or provided "inaccurate" responses, respectively. Those responses that were rated as "inaccurate" include responses such as "people who are 'intersex,'" "people who changed their sexual orientation," or "people whose behaviors are like the opposite sex."

Respondents' definitions of LGBT showed no significant difference between SLTs in medical settings and those in other settings—that is, social welfare foundations or schools: Fisher's exact, $p > .05$. The years of experience working as an SLT—that is, less than, or more than, 10 years—also had no significant effect on respondents' ability to define lesbian, gay, and bisexual groups: Fisher's exact, $p > .05$. However, SLTs who had worked for less than 10 years were significantly more likely to define transgender with an accurate, or accurate but too narrow, definition: $\chi^2(1) = 4.639$, $p = .031$, $Phi = .18$. Generally, respondents were better able to define "lesbian, gay, and bisexual groups" than "transgender." This confusion mirrors recent findings which show that "transgender" and "transsexual" might be used interchangeably for the transgender population (Sawyer et al., 2014).

Scope of practice and preparedness

Respondents were asked whether providing voice and communication services for transgender individuals was within the scope of SLTs' practice. The majority of respondents (75%) reported that it was, and a minority (13%) reported that they were not sure if it was within the scope of SLTs' practice. Years of experience working as an SLT—less than or more than 10 years—did not significantly affect those respondents who considered that providing services to the transgender population was within the scope of their practice: $\chi^2(2) = 1.238$, $p > .05$, $Phi = .09$. Similarly, there was no significant difference between SLTs who worked in a medical setting and those who worked in other settings, such as social welfare foundations or schools, regarding their opinion about the scope of their practice: $\chi^2(2) = 1.355$, $p > .05$, $Phi = .10$.

When respondents were asked to what extent they had received training about providing treatment for the transgender population in their educational experiences, 3% and 36% respectively reported that they had learned a great deal—4 hours or more—or very little—less than 4 hours—about how to provide treatment, however, the majority (61%) reported that they did not learn about it either in university education or in conferences. The number of years of experience working as an SLT—less than, or more than, 10 years—did not significantly affect respondents' learning time regarding how to provide treatment: $\chi^2(2) = 0.777$, $p > .05$, $Phi = .07$.

When respondents rated their level of agreement regarding whether their university education had prepared them well for providing services for transgender individuals, only 1 (1%) reported that they strongly agreed. Most (30%) reported "neutrally" or "disagreed" (42%), and 23% reported that they "strongly disagreed." Years of experience working as an SLT—less than, or more than, 10 years—did not significantly affect respondents' level of agreement on whether university education had prepared them well: $\chi^2(2) = 3.415$, $p > .05$, $Phi = .16$.

Generally, most respondents believed that providing voice and communication services for transgender clients was within the scope of their practice, even though the majority learned very little about this area either in university education or in professional conferences—in fact, more than half the respondents did not feel they had

been well prepared for providing either assessments or treatments for the transgender population. Future studies would do well to follow up on this finding with qualitative studies that suitably investigate *how or why* practitioners feel this way.

Competence

Respondents were asked to rate their level of agreement on whether they were comfortable about providing assessments for transgender clients. Respondents reported that they either "strongly agreed" (23%) or "agreed" (39%), while 6% "disagreed" and 1% "strongly disagreed." Employment settings, such as medical and other settings, which included social welfare foundations and schools, and years of working experience—less than, or more than, 10 years—did not significantly affect respondents' comfort levels regarding providing assessments for transgender clients who sought their services: $\chi^2(2) = 2.781$, $p > .05$, $Phi = .14$, and $\chi^2(2) = 5.464$, $p > .05$, $Phi = .20$, respectively.

Respondents were also asked to rate their level of agreement regarding whether they were comfortable in providing treatments for transgender clients. The majority "strongly agreed" or "agreed" (21 and 40%, respectively) while 10% "disagreed" or "strongly disagreed." There was no significant difference between SLTs who worked in medical settings and in other settings, such as social welfare foundations or schools, on their comfort level regarding providing treatments for transgender individuals: $\chi^2(2) = 1.061$, $p > .05$, $Phi = .09$. Nevertheless, SLTs who have worked for less than 10 years felt significantly more comfortable in providing treatments for transgender clients seeking services: $\chi^2(2) = 10.315$, $p = .006$, $Phi = .27$. Only 2 (1%) out of 140 were currently providing services to transgender clients, while 19 (14%) have experienced working with them in the past. However, the majority (85%) have not had any experience of providing either assessments or treatments for them. Overall, the respondents had positive attitudes toward transgender clients, even though the majority declared themselves not to have worked with them previously.

Discussion

The aim of this study was to investigate Taiwanese SLTs' knowledge, attitudes and experiences of providing therapy for transgender individuals. This section presents the survey findings, which are compared and contrasted with other research findings previously reported in the US. Additionally, study limitations and suggestions for future research are discussed.

According to the survey's findings, Taiwanese SLTs are faced with several LGBT-related challenges: (1) unfamiliarity with terminology, (2) inability to provide services to transgender individuals, and (3) lack of information about how to provide services to transgender clients.

In terms of terminology, findings show that Taiwanese SLTs are more familiar with the terminology used to address "lesbian," "gay," and "bisexual" individuals' than "transgender" individuals. This might have resulted from a current movement in Taiwan, whereby many people and associations have been campaigning to legalize same-sex marriage. Compared with their knowledge about "lesbian," "gay," and "bisexual" individuals, Taiwanese SLTs seem to be unfamiliar with transgender terminology, which can make it difficult for them to provide culturally competent, consistent and effective health services to these groups (Hancock & Haskin, 2015; Sawyer et al., 2014). Pitts et al. (2009) found a link between transgender individuals' positive healthcare experiences and culturally competent clinicians and practitioners who made them feel supported and respected by showing they understood their specific needs and challenges by using appropriate language and demonstrating non-judgmental attitudes. Similarly, Kelly and Robinson (2011) proposed that SLTs should be able to address their clients appropriately using accurate terminology and pronouns as this may promote a safe environment during therapy. These findings demonstrate that it is crucial for SLTs to establish a relationship that is based on respect for their transgender clients, which encourages transgender individuals to feel safe and comfortable about seeking their services. Moreover, such positive relationships can encourage them to reveal vital personal information when giving their case

histories, which are a crucial part in transgender voice assessments (Sawyer et al., 2014). Conversely, if clients do not feel comfortable with their SLTs, they might fail to pass on important information that might cause significant impact on the service they receive (Kelly & Robinson, 2011). Kelly and Robinson (2011) indicated that if clients are unwilling to disclose information about their partners, with whom they communicate most, this might reduce the chances of their partners being included in the intervention; thus an important element may be missing from the treatment process.

Therefore, as a first step toward facilitating positive relationships with transgender clients and establishing a safe atmosphere, SLTs need to learn and accurately use the terminology used among transgender groups (Sawyer et al., 2014). Steckly (2009) offered an overview of terminology and demographics of LGBT groups. Toward fostering a friendly and safe health care environment for transgender individuals, both Kelly and Robinson (2011) and Wei et al. (2015) gave several suggestions for clinicians to treat their clients respectfully and competently, such as using culturally sensitive questions when taking case history from clients. Asking "Do you have a significant other or partner?" will be more sensitive to LGBT individuals, rather than "Are you married?" Also, the neutral options can be added in the history forms, such as adding "others" in the gender column.

In terms of providing services to transgender individuals, findings in this survey show that the majority of Taiwanese SLTs (75%) considered that providing a voice and/or communication training to the transgender population was within the remit of their practice. This view is in line with the views of the national licensing board in the U.S (American Speech–Language Hearing Association). However, a minority either believed that these services should not fall within the remit of the service or were unsure whether they should. Although SLTs operate in accordance with the Taiwanese Speech Therapists Act (2008), which stipulates that their operations involve the assessment and treatment of voice and resonance disorders, the Act did not target any specific client group, and it gave no guidelines for those working with transgender individuals. Due to the time constraints and large numbers of patients in SLTs caseloads, training curriculums are unlikely to contain such a highly specialized topic (transgender voice). Consequently, some SLTs do not think providing a specialist service to transgender clients falls within the scope of their practice. This response might also have resulted from a lack of knowledge and appropriate training for working with transgender individuals. In terms of information about how to provide services to transgender clients, most Taiwanese SLTs reported that they had received less than four hours, or no training at all during university study or via conferences, for providing services to transgender clients. Consequently, a considerable number of SLTs stated that they did not believe they were well prepared for working with transgender groups. These findings are similar to those of both Hancock and Haskin (2015) and Sawyer et al. (2014), who showed that this issue should receive more attention in SLTs' training. Sawyer et al. reported that 62% of the SLTs sampled in their survey did not learn any specific information in their curriculum about how to provide services to transgender individuals. Specifically, 59% of SLTs did not feel comfortable providing assessment and 55% did not feel comfortable providing therapy. Many transgender respondents sampled by Pitts et al. (2009) reported that their clinicians/practitioners did not have much experience in treating them, hence they believed that clinicians needed to gain more knowledge and skill in working with them. These respondents also mentioned that they anticipated that practitioners had received better training in their university education than learning from the treatment process. Similarly, Horton-Ikard and Munoz (2010) found that clinicians were concerned because they lacked sufficient knowledge to offer culturally competent services to that particular group. This suggests that it is equally important to prepare SLTs to be culturally competent as well as to educate them in clinical methods for both assessing and treating transgender individuals.

In addition to education surrounding transgender voice services, Taiwanese SLTs who participated in this survey were asked about their

comfort levels and attitudes regarding providing assessments and interventions for transgender clients. According to Sawyer et al. (2014) these levels might involve respondents' personal feelings while providing services to members of the transgender population, which would not necessarily be a reflection of their professional competence. In this survey, unlike Sawyer et al.'s findings, the majority of SLT respondents indicated that they in fact felt comfortable regarding providing voice and communication services for such clients, even though most of them stated that they themselves had never previously worked with them. This survey's findings, therefore, were similar to those of Hancock and Haskin (2015), who generally reported positive attitudes toward transgender people, although the majority declared themselves to be not skilled in transgender voice and communication therapy. Interestingly, Taiwanese SLTs who worked in the SLT field for fewer than 10 years showed a significantly higher accuracy rate for describing transgender individuals. Moreover, they also felt significantly more comfortable in providing treatments for them. Consequently, it appears that those SLTs who completed their SLT training during the last decade are more likely to have encountered the terminology commonly used in the LGBT community, thus, it may have made them more understanding of individuals in this group, and therefore more comfortable when serving them.

Although being culturally competent is important, because of the limited time and the restrictions often surrounding academic curriculums, cultural diversity in general and gender diversity in particular are seldom addressed in SLTs' university education in Taiwan. Importantly, it is crucial to also investigate the current knowledge of university lecturers and clinical supervisors teaching speech–language therapy to SLT students. In a study by Stockman, Boult, and Robinson (2008) examining the faculty of clinical supervisors and administrators in speech–language therapy programs in the US findings showed that the faculty did not feel well prepared for teaching cultural diversity. Moreover, Kelly and Robinson (2011) found that issues surrounding sexual minority groups might not be addressed when the teaching involved multicultural issues. Consequently, because there are many challenges hindering the teaching in universities about issues relating to gender and sexual minority groups, Sawyer et al. (2014) suggested that online workshops and podcasts could be integrated into such teaching, while both Wang and Cheng (2012) and Wei et al. (2015) point out that these issues can also be addressed in the continuing education programs that are required for SLTs in order to maintain their license.

In terms of limitations, the study reported in this article involved 140 respondents and clearly the findings cannot be generalized to the whole Taiwanese SLT population. In addition, the majority had worked as SLTs for less than ten years. Future studies involving early career SLTs and those with longer clinical experience would provide a much broader view of SLTs' awareness and experiences of communication services for transgender individuals and would shed light on multicultural competency measures between these two groups of clinicians. Participant age was not recorded in the present study, and it would certainly be interesting to ascertain, in future work, whether younger practitioners might score higher on LGBT-affirmative measures, or multicultural competency measures, than more seasoned career clinicians. The online survey in this study meant that data collection could be obtained from a wide range of participants spread across Taiwan, and also that they could remain anonymous. While an online questionnaire is a convenient way to collect data from an even greater number of respondents, it is a method that may not reach those SLTs who do not have Internet access or who do not access the Internet frequently. In addition, cross-sectional surveys may be limiting in terms of methodological issues, including order effects and self-reflective biases. The survey used in this study included four open-ended questions; however, such questions possibly decreased participants' commitment to complete the whole questionnaire as more than 30 participants withdrew from the survey at the point when they encountered the open-ended questions. Future studies could integrate interviews with the online survey, and would both reduce the number of withdrawals and help the authors

to obtain more detailed information regarding participants' awareness and experience.

Information regarding SLTs' knowledge of transgender health care issues, such as, (i) their health care role, (ii) transgender clients' specific needs, and (iii) their knowledge about voice feminization/masculinization services, should be added in future studies in order to understand more about SLTs' awareness and capability to provide effective services. Studies like Stockman et al. (2008), who explored the importance of multicultural education in speech–language therapy and audiology programs in the US, can serve as a model for similar investigations in other contexts; and key recommendations around developing transgender cultural competence can be incorporated in core training and continuing education programs for SLTs across the world. Most importantly, there are two pathways that future studies should pursue, building on the present, and other relevant, research studies: (i) expansive future studies worldwide within a range of national healthcare settings, considering social and cultural variation as well as administrative healthcare variation; and (ii) a deliberate and measured program to ensure that studies such as this one can inform national healthcare policy in each setting. In terms of the first pathway, there has been very little work on practitioners' awareness of LGBT lived experience outside a few countries in the Global North such as the US and the UK. The field is wide open, and the gap needs to be filled. The authors of the present work are involved in networks with regional and national professional groups which will hopefully generate further similar studies. In this endeavor, it is critical to engage in mutually-informative North–South and South–South collaborative (and even comparative, in some cases) research. In relation to the second pathway, it will be important for studies such as this one to be communicated not only through academic publications and conferences, but also through policy makers and professional organizations/publications, as well as developed with the direct input of LGBT groups.

In terms of clinical practice, it would be important to find ways to communicate and to incorporate the findings of this study to clinicians, with the help of the relevant professional bodies.

Conclusion

Findings from this study showed that Taiwanese SLTs were, (i) more familiar with the terminology used to address "lesbian," "gay," and "bisexual" groups than "transgender" terminology, (ii) positive in their attitude toward transgender individuals, and (iii) comfortable when providing them with services. However, the majority of Taiwanese SLTs did not feel skilled in working with transgender individuals, even though most of them believed that providing them with voice and communication services was within their scope of practice. The present research highlights the need for SLTs working with transgender clients to become culturally competent, in order to minimize any disparities or inequalities affecting these groups, and for them to feel safe and comfortable in the process of changing their voice and communication style.

Conflict of interest

The authors declare that they have no conflict of interest to declare.

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